

Notice of Allowability

Application No.

10/046,019

Examiner

Hai Vo

Applicant(s)

COURTOY ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the filing of a terminal disclaimer on 03/30/2006.
2. ☒ The allowed claim(s) is/are 33,47,50-52,54 and 56-58.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 0421.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with William R. Robinson, Esq. on 04/21/2006.

The application has been amended as follows:

The claims:

Cancel claims 1-30, and 37-45.

Rewrite claim 33: (Currently Amended) A surface covering which comprises:

- (a) a substrate,
- (b) a foamed plastic layer overlaying the substrate,
- c) a first ink containing a photoinitiator printed in a design on said foamed plastic layer, optionally a second ink containing an inhibitor printed in a design on said foamed plastic layer and, optionally, a third ink which does not contain an inhibitor or photoinitiator printed on said foamed plastic layer,

- (d) a cured coating or a cured layer containing a crosslinkable photopolymer or monomer overlaying the foamed plastic layer and first ink wherein the portion of the cured coating or the cured layer disposed over the first ink is mechanically embossed with a ~~UV-cured~~ first mechanically embossed texture which is UV cured having relatively deep emboss depths as compared with a matting grain and the portion of the cured

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coating or the cured layer disposed over the optional second ink is chemically embossed,

wherein the portion of the cured coating or the cured layer which is not disposed over the first ink and the optional second ink is mechanically embossed with a second mechanically embossed texture different from the first mechanically embossed texture.

Rewrite claim 50: (Currently Amended) A surface covering which comprises:

- (a) a substrate,
- (b) a foamed plastic layer overlaying the substrate,
- (c) a first ink containing a photoinitiator and an inhibitor printed in a design on said foamed plastic layer, optionally a second ink containing an inhibitor printed in a design on said foamed plastic layer, and optionally, a third ink which does not contain an inhibitor or photoinitiator printed in a design on said foamed plastic layer,
- (d) a cured coating or a cured layer containing a crosslinkable photopolymer or monomer overlaying the foamed plastic layer and first ink wherein the portion of the cured coating or the cured layer disposed over the first ink is i) mechanically embossed with a ~~UV-cured~~ first mechanically embossed texture which is UV cured having relatively deep emboss depths as compared with a matting grain and ii) chemically embossed, and the portion of the cured coating or the cured layer disposed over the optional second ink is chemically embossed,

wherein the portion of the cured coating or the cured layer which is not disposed over the first ink and the optional second ink is mechanically embossed with a second mechanically embossed texture different from the first mechanically embossed texture.

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Rewrite claim 51: (Currently Amended) A surface covering which comprises:

(a) a substrate,

(b) a foamed plastic layer overlaying the substrate,

(c) a first ink containing a photoinitiator and an inhibitor printed in a design on said foamed plastic layer, optionally a second ink containing an inhibitor printed in a design on said foamed plastic layer and, optionally, a third ink which does not contain an inhibitor or photoinitiator printed on said foamed plastic layer, and a fourth ink containing a photoinitiator,

(d) a cured coating or a cured layer containing a crosslinkable photopolymer or monomer overlaying the foamed plastic layer and first ink wherein the portion of the cured coating or the cured layer disposed over the first ink is chemically embossed and is mechanically embossed with a ~~UV-cured~~ first mechanically embossed texture which is UV cured having relatively deep emboss depths as compared with a matting grain; the portion of the cured coating or the cured layer disposed over the optional second ink is chemically embossed and the mechanically embossed portion of the cured coating or the cured layer that is not disposed over the first ink is smooth over,

wherein the portion of the cured coating or the cured layer which is not disposed over the first ink and the optional second ink and the fourth ink is mechanically embossed with a second mechanically embossed texture different from the first mechanically embossed texture.

Rewrite claim 52: (Currently Amended) A surface covering which comprises:

(a) a substrate,

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(b) a plastic layer overlaying the substrate,

c) a first ink containing a photoinitiator printed in a design on said plastic layer, and an optional third ink not containing a photoinitiator printed on said foamed plastic layer,

(d) a cured coating or a cured layer containing a crosslinkable photopolymer or monomer overlaying the plastic layer and the first ink and optional third ink wherein the portion of the cured coating or the cured layer disposed over the first ink is mechanically embossed with a ~~UV-cured~~ first mechanically embossed texture which is UV cured having relatively deep emboss depths as compared with a matting grain,

wherein the portion of the cured coating or the cured layer which is not disposed over the first ink is mechanically embossed with a second mechanically embossed texture different from the first mechanically embossed texture.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance: Note that the provisional obviousness-type double patenting has been withdrawn in view of the terminal disclaimer filed on 03/30/2006. The terminal disclaimer disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Patent Application 10/321,617 has been reviewed and is accepted. The terminal disclaimer has been recorded. Additionally, the Examiner's amendment is sufficient to overcome the art rejections and sufficient to place the instant claims in condition for allowance.

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Of the references of record, the most pertinent are Brossman et al (US 6,613,256), Rutsch (US 5,147,901), Chen et al (US 6,228,463) and Courtoy et al (US 6,146,711).

Brossman discloses a synthetic covering comprising a substrate 6, a foamed plastic layer overlaying 14 the substrate 6, a first ink 16 containing an expansion inhibitor on the foam layer (figure 4). Brossman teaches a wear layer 18, a polyurethane top coat 20 overlaying the foam layer and the ink wherein the portion of the cured layer disposed over the first ink is mechanically embossed with a textured surface (column 8, lines 20-25, column 1, lines 30-36). The portion of the wear layer not disposed over the first ink 16 or the foamed regions is smooth as shown in figures 3 and 4. Brossman discloses that the "foamed regions" correspond to "up areas" of the chemical embossing and the "non-foamed regions" correspond to "down areas" of the chemical embossing (column 3, lines 24-27). Likewise, the portion of the wear layer over the non-foamed regions is chemically embossed. Brossman teaches the wear layer overlying the foamed and non-foamed regions are independently predominately textured. The wear layer overlying the foamed regions is predominately textured first and subsequently the wear layer overlying the unfoamed regions is predominately textured (column 4, lines 27-40). Brossman does not disclose the first ink containing a photoinitiator. Rutsch, however, teaches a printing ink used in floor coverings containing propiophenones as a photoinitiator to provide an improved stability on storage and increased resistance to yellowing (abstract, column 8, lines 14-17). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ

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propiophenones as a photoinitiator in the printing ink motivated by the desire to provide the printing ink having increased resistance to yellowing. The combined teachings of Brossman et al (US 6,613,256) and Rutsch (US 5,147,901) do not suggest a surface covering wherein the portion of the cured coating disposed over the first ink is mechanically embossed with first mechanically embossed texture **which is UV cured**. Chen et al (US 6,228,463) teaches an surface covering comprising a backing layer, a foamed and chemically embossed plastic layer overlying the backing layer, an ink printed in a design on the foamed plastic layer, a wear layer that is mechanically embossed with a surface texture while it is soft state and a top coat made from a thermosettable UV curable (column 3, lines 25-30, and column 9, lines 37-40). In view of the teachings of Chen, one of skilled in the art would not have been motivated to substitute a thermosettable UV curable top coat of Chen for the wear layer or the topcoat of Brossman because of the differences in the heating condition required to form these layers. Both the wear layer and the top coat of Brossman require the heating from 275°F to 325°F to gel the composition and fuse the layers together whereas the Chen UV curable urethane requires a UV light to cure the urethane coating. The typical operating temperature of the UV lamp is about 80°C or 176°F, which is not high enough to gel the composition and fuse all the individual layers together to provide a surface covering. Accordingly, the combination of Brossman and Chen does not suggest a reasonable expectation of success.

Courtoy et al (US 6,146,711) teaches a curable coating composition for a surface covering comprising a photoinitiator and a crosslinkable monomer. Courtoy discloses

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the curable coating is mechanically embossed and exposed to a UV radiation to crosslink the crosslinkable monomers. This freezes the mechanical embossing to the surface covering. In light of the teachings of Courtoy, one skilled in the art would be motivated to substitute the curable coating composition of Courtoy for the wear layer of Brossman so as to fix the design obtained by mechanical embossing selectively onto the wear layer overlying the non-foamed regions. Since the photoinitiator in the curable coating composition is sufficient to ensure quick and complete crosslinking of the composition which is cured by UV radiation, it is not necessary to incorporate an additional photoinitiator into the first ink over which the mechanically embossed portion of the cured coating is disposed. The combination of Brossman and Courtoy does not teach a surface covering wherein a first ink contains a photoinitiator.

Chen et al (US 6,228,463) teaches an surface covering comprising a backing layer, a foamed and chemically embossed plastic layer overlying the backing layer, an ink printed in a design on the foamed plastic layer, a wear layer disposed over the ink is chemically embossed and mechanically embossed with a mechanically embossed texture and a top coat made from a thermosettable UV curable (column 3, lines 25-30, and column 9, lines 37-40). Chen does not teach the wear layer that contains a crosslinkable monomer and is UV cured. Chen discloses a surface covering having a continuous wear layer, a continuous topcoat located above the wear layer and a non-continuous topcoat above the continuous topcoat. Chen is concerned with a gloss effect of the surface covering by formulating a predetermined gloss level in each individual coating and the difference in gloss level can be achieved by using different

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concentration of flattening agents. There is no motivation to combine Chen with Brossman to achieve the claimed invention, i.e., a portion of the topcoat overlying the ink is mechanically embossed and a portion of the topcoat not overlying the ink is not mechanically embossed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on Monday through Thursday, from 9:00 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HV

Hai Vs

HAI VO
PRIMARY EXAMINER